

## **RESPONSE**

By this amendment, new claim 24 has been added. Claims 1 – 24 are pending.

### **Amendments to the Specification:**

The specification has been amended to insert the priority claim as indicated by the Examiner.

The specification has also been amended at paragraph [0010] to correct typographical errors.

### **Rejections under 35 U.S.C. 112, second paragraph**

The Examiner has rejected the claims as being indefinite. The applicants have amended the claims 1 – 23 in accordance with the Examiner's suggestions. In addition, the applicants have amended claim 23 to identify the compound being prepared. Support for this amendment is found in paragraph [0009] of the published application, in which International patent application WO 97/40029 is incorporated by reference.

### **Rejections under 35 U.S.C. §103**

Claim 1 has been rejected under 35 U.S.C. §103(a) as being unpatentable over International patent application WO 01/27083 (Giordano) in view of Stanforth, S., "Catalyst Cross-Coupling Reactions in Biaryl; Synthesis", *Tetrahedron*, 1998, 54, no. 3-4, pp. 263-303 (Stanforth et al.).

The present application describes and claims a method of preparing aryl-pyridines using a cross-coupling reaction. In the reaction as claimed, the pyridyl ring includes the magnesium or zinc halide and therefore it is the pyridyl ring which functions as the Grignard reagent. This is in contrast to the method taught by Giordano, in which the aryl ring is the Grignard reagent. As such, the current application provides an alternative method of forming aryl-pyridines to that

taught by Giordano, having the pyridyl ring provide the Grignard reagent, rather than the aryl ring.

Prior to the present application, only a limited number of cross-coupling reactions were known in which a pyridyl ring provided the Grignard reagent. For example, at page 271, Stanforth describes the preparation of 2,2'-bipyridyl from 2-bromopyridine and 2-pyridylmagnesium bromide, and states that the reaction produced a low yield of only 13%. Such a low yield teaches away from the usefulness of pyridyls as Grignard reagents. However, the applicants have made the surprising discovery that a pyridyl Grignard reagent can be used to produce aryl-pyridines in reactions producing high yields. For example, the aryl-pyridyl cross coupling reaction described in example 5 produced an 85% yield, example 6 produced a 70% yield, and example 7 produced a 64% yield. Therefore, even in the example with the lowest yield, the result was surprisingly superior, producing in a yield which was nearly five times greater than that of Stanford.

In view of the foregoing, it is submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of the application are respectfully requested. The Examiner is invited to telephone the undersigned if the Examiner believes it would be useful to advance prosecution. The Commissioner is hereby authorized to charge any additional filing fees required to Deposit Account No. 06-1910.

Respectfully submitted,

/Mia E. Mendoza/

Mia E. Mendoza  
Registration No. 56,688

FREDRIKSON & BYRON, P.A.  
200 South Sixth Street, Suite 4000  
Minneapolis, MN 55402-1425 USA  
Telephone: (612) 492-7000  
Facsimile: (612) 492-7077

*Please grant any extension of time necessary for entry; charge any fee due to Deposit Account No. 06-1910.*

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